



# Active Bacterial Core Surveillance (ABCs) Report Emerging Infections Program Network



## Methicillin-Resistant *Staphylococcus aureus*, 2005 (Updated)<sup>†</sup>

### ABCs Areas

California (3 county San Francisco Bay area); Colorado (5 county Denver area); Connecticut; Georgia (8 county Atlanta area); Maryland (Metro Baltimore area); Minnesota (1 metro Twin Cities county); New York (1 Rochester county); Oregon (3 county Portland area); Tennessee (1 Nashville county).

### ABCs Population

The surveillance areas represent **16,489,254** persons

Source: National Center for Health Statistics bridged-race vintage 2005 postcensal file

### ABCs Case Definition

Invasive methicillin-resistant *Staphylococcus aureus* (MRSA) disease: isolation of MRSA from a normally sterile site in a resident of the surveillance area in 2005. Cases of disease are classified into one of three epidemiologic classifications. A case is classified as hospital-onset (HO) if the MRSA infection was identified more than 2 days after hospital admission; as healthcare-associated community-onset (HACO) if the MRSA infection was identified 2 or fewer days after admission and had one of more of the following: 1) a history of hospitalization, surgery, dialysis or residence in a long term care facility in the previous year, or 2) the presence of a central vascular catheter. If none of the previously mentioned criteria are met, a case is classified as community-associated (CA)<sup>†</sup>.

### ABCs Methodology

ABCs personnel routinely contacted all microbiology laboratories serving acute care hospitals in their area to identify cases. Standardized case report forms that include information on demographic characteristics, clinical syndrome, and outcome of illness were completed for each identified case. Selected isolates were collected and sent to CDC for routine testing including; antimicrobial susceptibility testing, pulsed field gel electrophoresis (PFGE), toxin testing and *SCCmec* typing. Regular laboratory audits assessed completeness of active surveillance and detected additional cases.

Rates of invasive MRSA disease were calculated using population estimates for 2005. For national estimates of cases, race- and age-specific rates of disease were applied from the aggregate surveillance area to the age and racial distribution of the 2005 U.S. population. Cases with unknown race were distributed by site based on reported race distribution for known cases.

### <sup>†</sup>Epidemiological Classification Definition Changes

Previous documented MRSA colonization or infection is not a determinant in classifying patients, unlike previously published estimates which include such patients in the HACO category. HO cases are now defined based on reported calendar dates (i.e. greater than 2 "48 hours) this also differs from previously published estimates. (JAMA, 2007 Oct 17; 298 (15): 1765-71)

### Reported ABCs Profiles

Race	No.	(Rate*)
White	3445	(28.7)
Black	2358	(78.1)
Other	173	(11.7)

Unknown race (n=639) distributed amongst known

\*Cases per 100,000 population for ABCs areas

MRSA Class	No. (Rate*) Cases <sup>^</sup>	No. (Rate*) Deaths <sup>~</sup>	PFGE Type (N,%)	
			USA100	USA300
HO	1573 (9.5)	408 (2.5)	293 (75.9)	50 (13.0)
HACO	3366 (20.4)	548 (3.3)	501 (65.2)	155 (20.2)
CA	933 (5.7)	98 (0.6)	54 (26.9)	128 (63.7)

\*Cases per 100,000 population for ABCs areas

<sup>^</sup>n=104 ~n=15; could not be classified after chart review

PFGE Type (%)	% PVL Pos.	Clinda-R <sup>^</sup>	T/S-R <sup>~</sup>	Levo-R <sup>*</sup>
USA100 (61.9)	0	94.7	1.9	99.9
USA300 (25.4)	95.7	8.6	1.1	48.0
USA500 (4.8)	1.5	47.0	92.4	95.5
USA800 (1.7)	0	8.3	4.2	54.2
IBERIAN (1.7)	4.2	29.2	70.8	87.5
OTHER (4.4)	13.1	60.7	3.3	54.1

n=1379 for PFGE Type, n=1373 for all other

<sup>^</sup>% Clindamycin resistant; <sup>~</sup>% Trimethoprim-sulfamethoxazole resistant;

<sup>\*</sup> % Levofloxacin resistant

Syndrome	CA (n=933)	HACO (n=3366)	HO (n=1573)
Bloodstream infection			
with other syndrome	611	2588	1199
with no other syndrome	186	1280	765
Pneumonia	128	396	256
Osteomyelitis	82	256	92
Endocarditis	114	205	37
Cellulitis	200	289	83
Skin abscess*	60	75	25

Note: Some cases had more than one syndrome.

\*Category includes skin abscess, necrotizing fasciitis, gangrene, wounds

### National Estimates of Invasive Disease

Cases: 105,222 (35.50/100,000)

Deaths: 20,094 (6.78/100,000)

### Citation

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Available via the Internet:

<http://www.cdc.gov/abcs/reports-findings/survreports/mrsa05.pdf>

For more information, visit our web site:

<http://www.cdc.gov/abcs>